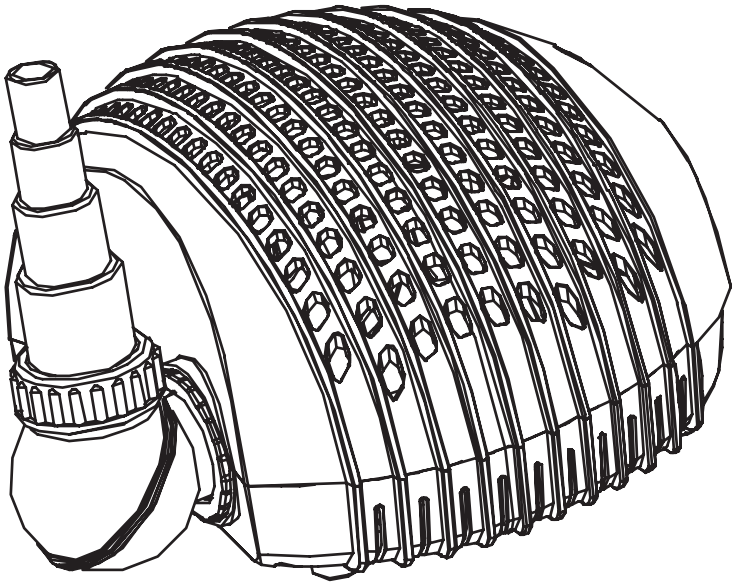
PACIFICHYDROSTAR®

2150 GPH Submersible Waterfall Pump

Item 68418



⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

When unpacking, make sure that the product is intact and undamaged.
If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

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Before start-up, note the following:

The pump can be connected to any shock-proof plug which has been installed according to regulations.
The plug must have a supply voltage of 120 V~ at 60 Hz.

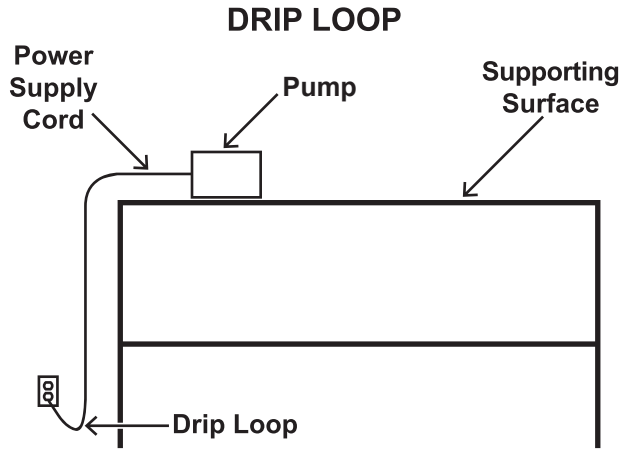
CAUTION

This pump has been evaluated for use with water only.

⚠WARNING

IMPORTANT! For your own safety – before starting to run the pump, please have the following items checked by an expert:

1. Risk of electric shock – This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, connect only to a properly grounded, grounding-type receptacle.
2. Risk of electric shock – This pump has not been investigated for use in swimming pool areas.
3. The electrical connections must be protected from moisture.
4. If there is danger of flooding, the electrical connections must be taken to higher ground.
5. Circulation of caustic fluids, as well as the circulation of abrasive materials, must be avoided at all costs.
6. The pump must be protected from frost.
7. The pump must be protected from running dry.
8. Access by children should also be prevented with appropriate measures.
9. **POSITION OF PUMP:**



To avoid the possibility of the pump plug or receptacle getting wet, position pump to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. The user should arrange a “drip loop” in the cord connecting the pump to a receptacle. The “drip loop” is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle.

10. If the plug or receptacle does get wet, DON’T unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the pump. Then unplug and examine for presence of water in the receptacle.
11. WARNING: Handling the Power Cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
12. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Fluid Type

The Pump is designed for use with water with a maximum temperature of 95° F (35°C).
Do not use the pump for other fluids, especially not fuels, cleaning fluids, or other chemical products.

Specifications

Minimum Water Height	6 IN. above top of pump or inlet
Electrical Requirements	120V~ / 60Hz / 2.3A
Power Cord Length	25 FT.
Maximum Capacity	2150 GPH
Maximum Delivery Height	20 FT.
Inlet/Discharge Size	$1^1/_2$ IN.
Hose Adapter Sizes	$1^1/_2$ IN. - $1^1/_4$ IN. - 1 IN. - $^3/_4$ IN. OD

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Note: Do not use in areas containing fish or other pets, such as aquariums or koi ponds.

Installation

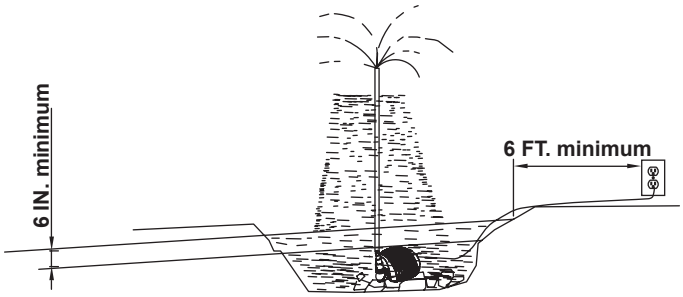
Read the ENTIRE WARNING section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Unplug the Pump from its electrical outlet before assembling, inspecting, making any adjustments, or servicing.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

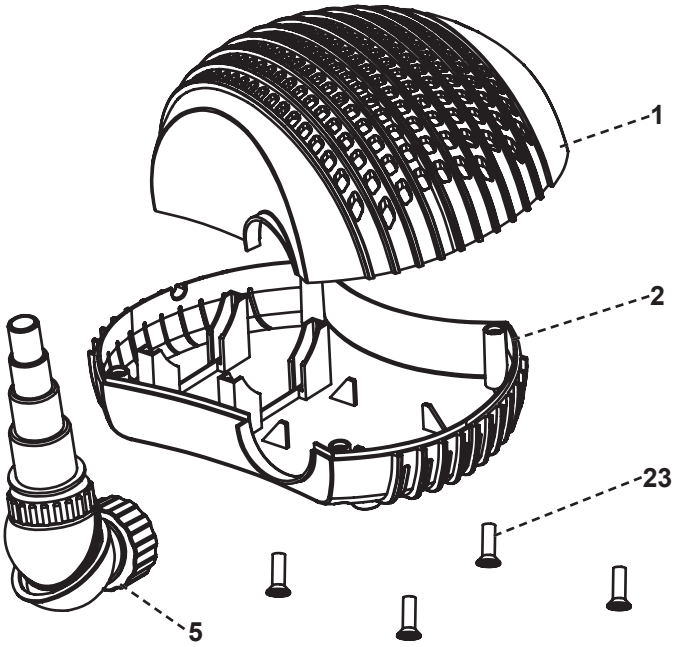
Submerged Setup



1. Submerge the pump under at least 6 inches of water to prevent the pump from taking in air.
2. The pond must be at least 6 feet away from the receptacle.
3. To reduce wear on the pump, place the pump on a platform above mud, sand, small rocks, and other debris.
4. If running with fountain jets, the pump must be mounted firmly and horizontally on a platform.
5. Connect a delivery hose (not included) to the Hose Adapter (3).
6. Connect the free end of the delivery hose to a sprayer, upper waterfall basin, or similar device (none included).
7. Adjust the Swivel Connector (5) and pump location to allow the delivery hose to lay straight and prevent kinking.

Non-submerged Setup

1. Position the pump lower than the water surface on the side of the pond so that the water will fill the pump. This Pump is not self-priming.
2. Remove the four Screws (23) that hold the Upper Housing (1) on. Remove the Upper Housing.



3. Connect inlet hose to inlet port on the end of pump and delivery hose to the discharge port on the side of pump or the Hose Adapter (3). The Swivel Connector (5) can also be removed if using a threaded connection is preferred. Connections must be tight and leakproof.
4. Secure the Motor Housing (14) to prevent movement during operation. This will no longer be held in place by the Upper Housing when disassembled.
5. The inlet must:
   a. use a filter or screen,
   b. be positioned so that it cannot take in mud, sand, small rocks, or other debris,
   c. be kept at least 6 inches under the water's surface at all times, and
   d. be secured to prevent movement.
6. Fill the inlet hose and pump with water before turning it on.
7. Connect the free end of the delivery hose to a sprayer, upper waterfall basin, or similar device (none included).
8. Adjust the Swivel Connector (if used) and pump location to allow the delivery hose to lay straight and prevent kinking.

Power Supply

1. The pump is equipped with a shock-proof plug according to regulations.
   The pump is designed to be connected to 120 V~, 60 Hz, **GFCI-protected**, safety socket.
2. Make sure that the socket is sufficiently secured and is in excellent condition.
3. When the plug is inserted into the socket the pump will start operating.

WARNING! If the power cord or plug is damaged, do not use the pump. The power cord or plug may only be repaired by a certified electrician.

Area of use

1. This pump is designed for use as a Pump in an area not used for swimming.
2. This pump is not intended for use in areas containing fish or other pets.

Operation

Read the ENTIRE WARNING section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

1. After reading these instructions, consider the following points before starting the pump:
   a. Verify that the delivery hose is properly connected.
   b. Verify that the electrical connection is 120 V~, 60 Hz.
   c. Verify that the electrical socket is in good condition.
   d. Verify that water and moisture cannot get near the power supply socket.
   e. Verify that the pump is installed so as to prevent running dry. The inlet or top of the pump must be under at least 6 inches of water at all times.
   f. The water temperature should not exceed 95° F (35°C).
   g. Do not let the pump freeze.
2. To prevent tripping, run any extension cord used away from walkways that lead to your location.
3. Plug the Pump into the power outlet. The Pump will begin operating.
4. When not using the Pump for a long period of time, unplug the power cord, remove it from the water, rinse with cold, clean, water and let it dry before storing it inside away from children.

Maintenance

⚠WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK:
If the power cord or plug is damaged, do not use the pump.
The power cord or plug may only be repaired by a certified electrician.

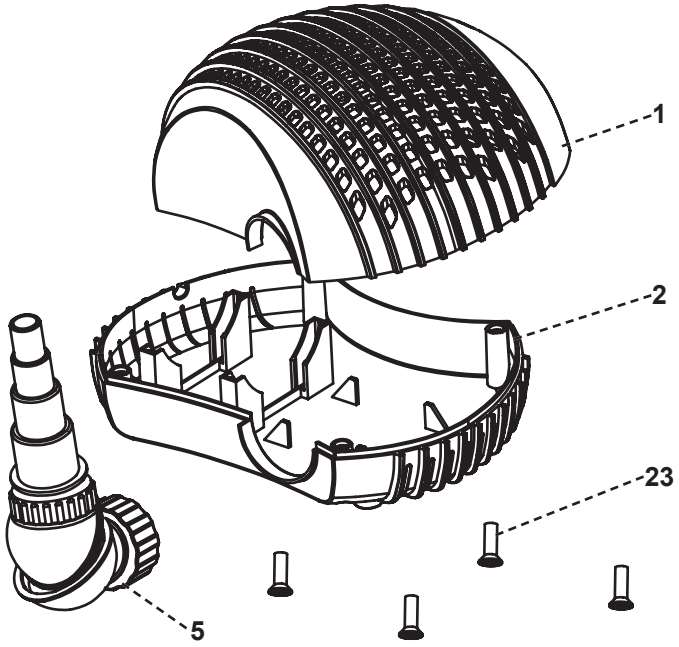
TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Unplug the Pump from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

Cleaning

Clean the pump at least monthly, and more frequently if the performance decreases.

Note: Depending on your installation setup, some of the following steps may not apply.

1. Disconnect power cord.
2. If pump is not installed in a submerged position, clamp or close inlet hose to prevent water leakage.
3. Remove the inlet hose and the delivery hose.
4. Remove the four Screws (23) that hold the Upper Housing (1) on. Remove the Upper Housing.



5. Remove the Connector (6) and the Swivel Connector (5).
6. Use a small toothbrush or stream of water to remove any debris from the impeller. A garden hose can be used to rinse out the inlet hose and the delivery hose.
7. Reassemble the Upper Housing, reatttach hose(s), and remount pump in place.
8. If pump is not installed in a submerged position, refill inlet hose and pump with water before restarting.
9. Dry hands before reconnecting power cord.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Pump will not start	1. Cord not connected.	1. Check that cord is plugged in.
	2. No power at outlet.	2. Check power at outlet. Check circuit breaker for outlet.
	3. Pump discharge or hose kinked or obstructed.	3. Straighten hose and flush out with garden hose.
	4. Filter, inlet or impeller clogged.	4. Clean out filter, inlet and impeller.
	5. Impeller broken or jammed.	5. Open pump and turn impeller to ensure it spins freely. Keep filter in place during use to prevent impeller damage.
Low flow	Impeller clogged.	Check and clean per instructions above.

Follow all safety precautions whenever diagnosing or servicing the appliance. Disconnect power supply before service.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

Part	Description	Qty.
1	Upper Housing	1
2	Lower Housing	1
3	Hose Adapter	1
4	Connector	1
5	Swivel Connector	1
6	Connector	1
7	Pump Housing	1
8	Impeller	1
9	Shaft	1
10	O-ring	1
11	Bearing	1
12	O-ring	1

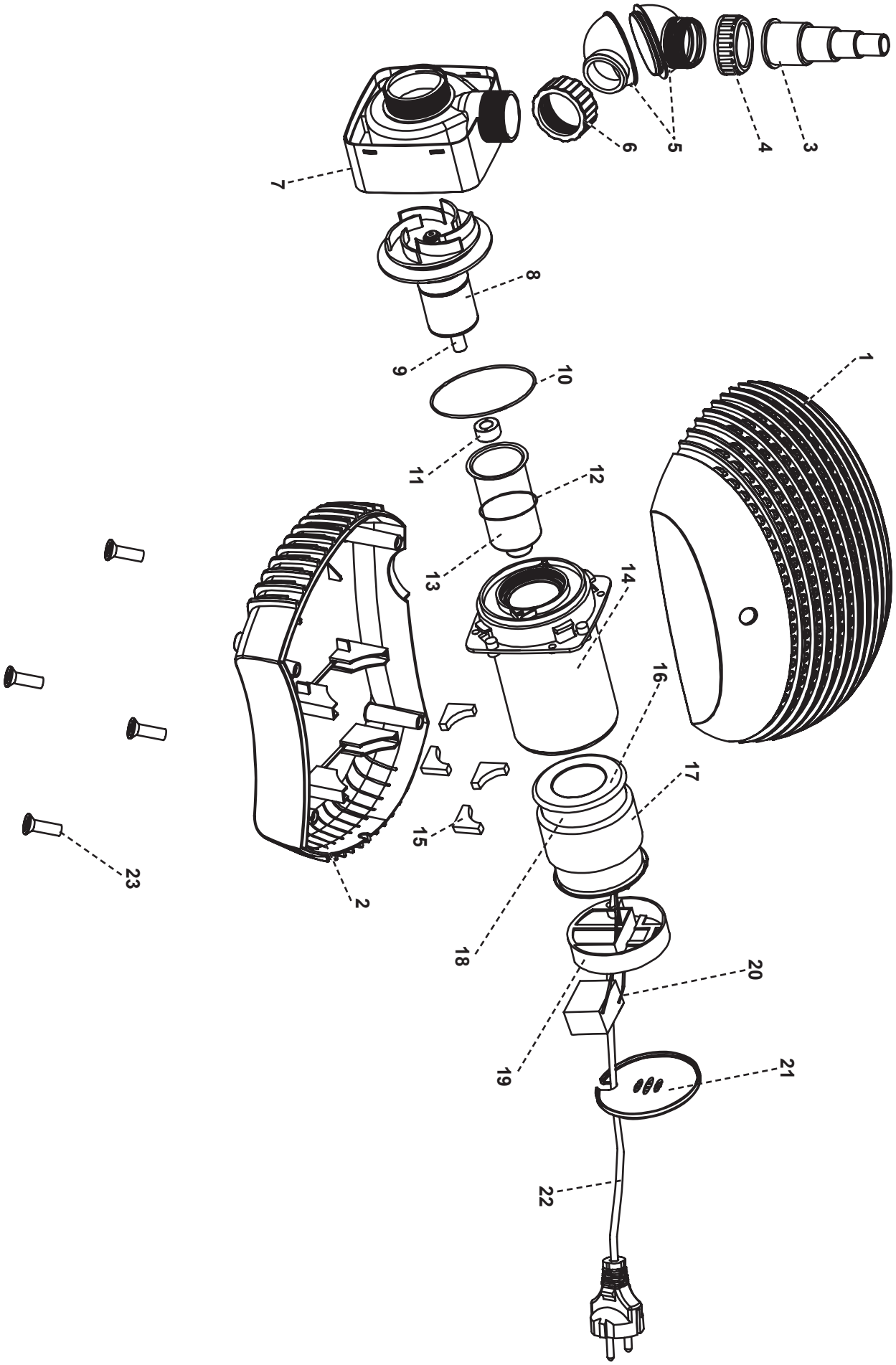
Part	Description	Qty.
13	Cover	1
14	Motor Housing	1
15	Mount	4
16	Spool	1
17	Stator	1
18	Motor Winding	1
19	Capacitor Holder	1
20	Capacitor	1
21	Back Cover	1
22	Power Cord	1
23	Screw	4

Record Product's Serial Number Here:_____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

ASSEMBLY DIAGRAM



LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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